

|  |   |                                  |                                       |
|--|---|----------------------------------|---------------------------------------|
| 2. AMENDMENT/MODIFICATION NO.<br><b>0004</b> | 3. EFFECTIVE DATE<br><b>29 May 2003</b> | 4. REQUISITION/PURCHASE REQ. NO. | 5. PROJECT NO. <i>(If applicable)</i> |
|--|---|----------------------------------|---------------------------------------|

|  |  |
|--|--|
| 6. ISSUED BY<br><br><b>U.S. ARMY ENGINEER DISTRICT, ALBUQUERQUE<br/>CORPS OF ENGINEERS<br/>4101 JEFFERSON PLAZA, N.E.<br/>ALBUQUERQUE, NEW MEXICO 87109-3435</b> | 7. ADMINISTERED BY <i>(If other than Item 6)</i><br><br><b>U.S. ARMY ENGINEER DISTRICT, ALBUQUERQUE<br/>CORPS OF ENGINEERS<br/>4101 JEFFERSON PLAZA, N.E.<br/>ALBUQUERQUE, NEW MEXICO 87109-3435</b> |
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|  |     |  |
|--|-----|--|
| 8. NAME AND ADDRESS OF CONTRACTOR <i>(No., street, county, State and ZIP Code)</i> | (√) | 9A. AMENDMENT OF SOLICITATION NO.<br><b>DACA47-03-R-0019</b> |
|  | X   | 9B. DATED <i>(SEE ITEM 11)</i><br><b>02 May 2003</b>         |
|  |     | 10A. MODIFICATION OF CONTRACTS/ORDER NO.                     |
|  |     | 10B. DATED <i>(SEE ITEM 13)</i>                              |

**11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS**

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers  is extended,  is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

**13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

|     |  |
|-----|--|
| (√) | A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: <i>(Specify authority)</i> THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.  |
|     | B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES <i>(such as changes in paying office, appropriation date, etc.)</i> SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b). |
|     | C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:   |
|     | D. OTHER <i>(Specify type of modification and authority)</i>   |

**E. IMPORTANT:** Contractor  is not,  is required to sign this document and return \_\_\_\_\_ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

**PROJECT: SECURITY FORCES OPERATIONS FACILITY, CANNON AIR FORCE BASE, CURRY COUNTY, NEW MEXICO**

1. This is Amendment No. 4 to Solicitation No. DACA47-03-R-0019; 02 May 2003. The following revisions shall be incorporated into the specifications. All other provisions shall remain unchanged.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

|  |   |   |                  |
|--|---|---|------------------|
| 15A. NAME AND TITLE OF SIGNER <i>(Type or print)</i>     | 16A. NAME AND TITLE OF CONTRACTING OFFICER <i>(Type or print)</i> |   |                  |
| 15B. CONTRACTOR/OFFEROR                                  | 15C. DATE SIGNED  | 16B. UNITED STATES OF AMERICA                         | 16C. DATE SIGNED |
| _____<br><i>(Signature of person authorized to sign)</i> |   | BY _____<br><i>(Signature of Contracting Officer)</i> |                  |

2. SPECIFICATIONS: Delete the following listed pages and substitute the pages attached hereto. On the revised pages, for convenience, changes are emphasized by the amendment number in parentheses before and after changes from the previous issue. All portions of the revised (or new) pages shall apply whether or not changes have been indicated.

Delete Page

Insert Page

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08110-4  
08710-10  
08710-12

03200-1 thru 03200-4  
05090-1 thru 05090-7  
08110-4  
08710-10  
08710-12

//////////LAST ITEM//////////

## SECTION 03200

## CONCRETE REINFORCEMENT

## PART 1 - GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

## ACI INTERNATIONAL (ACI)

|              |   |
|--------------|---|
| ACI 318/318R | (1999) Building Code Requirements for Structural Concrete and Commentary          |
| ACI 318M     | (1999) Building Code Requirements for Structural Concrete and Commentary (Metric) |

## AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

|                   |   |
|-------------------|---|
| ASTM A 36/A 36M   | (1997) Carbon structural Steel  |
| ASTM A 82         | (1997a) Steel Wire, Plain, for Concrete Reinforcement                     |
| ASTM A 184/A 184M | (1996) Fabricated Deformed Steel Bar Mats for Concrete Reinforcement      |
| ASTM A 496        | (1997) Steel Wire, Deformed, for Concrete Reinforcement                   |
| ASTM A 615/A 615M | (1996a) Deformed and Plain Billet-Steel Bars for Concrete Reinforcement   |
| ASTM A 706/A 706M | (1998) Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement |

## AMERICAN WELDING SOCIETY (AWS)

|          |  |
|----------|--|
| AWS D1.4 | (1998) Structural Welding Code - Reinforcing Steel |
|----------|--|

## CONCRETE REINFORCING STEEL INSTITUTE (CRSI)

|            |                                    |
|------------|------------------------------------|
| CRSI MSP-1 | (1996) Manual of Standard Practice |
|------------|------------------------------------|

## 1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used,

a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 - SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Reinforcement; G, ED.

Detail drawings showing reinforcing steel placement, schedules, sizes, grades, and splicing and bending details.

SD-03 Product Data

Welding; FIO.

Welders' qualifications.

SD-07 Certificates

Reinforcing Steel; FIO.

Certified copies of mill reports attesting that the reinforcing steel furnished contains no less than 25 percent recycled scrap steel and meets the requirements specified herein, prior to the installation of reinforcing steel.

1.3 WELDING

Welders shall be qualified in accordance with AWS D1.4. Qualification test shall be performed at the worksite and the Contractor shall notify the Contracting Officer 24 hours prior to conducting tests. Special welding procedures and welders qualified by others may be accepted as permitted by AWS D1.4.

1.4 DELIVERY AND STORAGE

Reinforcement and accessories shall be stored off the ground on platforms, skids, or other supports.

PART 2 - PRODUCTS

2.1 DOWELS

Dowels shall conform to ASTM A 615, Grade 60, or smooth bars conforming to ASTM A 36 as indicated on the drawings.

2.2 FABRICATED BAR MATS

Fabricated bar mats shall conform to ASTM A 184/A 184M.

### 2.3 REINFORCING STEEL

Reinforcing steel shall be deformed bars conforming to ASTM A 615/A 615M or ASTM A 706/A 706M, Grade 60 and sizes as indicated.

### 2.4 WIRE TIES

Wire ties shall be 16 gauge or heavier black annealed steel wire.

### 2.5 SUPPORTS

Bar supports for formed surfaces shall be designed and fabricated in accordance with CRSI MSP-1 and shall be steel or precast concrete blocks. Precast concrete blocks shall have wire ties and shall be not less than 100 mm by 100 mm (4 inches) square when supporting reinforcement on ground. Precast concrete block shall have compressive strength equal to that of the surrounding concrete. Where concrete formed surfaces will be exposed to weather or where surfaces are to be painted, steel supports within 13 mm (1/2 inch) of concrete surface shall be galvanized, plastic protected or of stainless steel. Concrete supports used in concrete exposed to view shall have the same color and texture as the finish surface. For slabs on ground, supports shall be precast concrete blocks or plastic coated steel fabricated with bearing plates. Plastic supports are not acceptable.

## PART 3 - EXECUTION

### 3.1 REINFORCEMENT

Reinforcement shall be fabricated to shapes and dimensions shown and shall conform to the requirements of ACI 318/318R/318M. Reinforcement shall be cold bent unless otherwise authorized. Bending may be accomplished in the field or at the shop. Bars shall not be bent after embedment in concrete. Safety caps shall be placed on all exposed ends of concrete reinforcement bars that pose a safety hazard. Wire tie ends shall face away from the forms or top surface of slabs.

#### 3.1.1 Placement

Reinforcement shall be free from loose rust and scale, dirt, oil, or other deleterious coating that could reduce bond with the concrete. Reinforcement shall be placed in accordance with ACI 318/318R/318M at locations shown plus or minus one bar diameter. Reinforcement shall not be continuous through expansion joints and shall be as indicated through construction or contraction joints. Concrete coverage shall be as indicated or as required by ACI 318/318R/318M. If bars are moved more than one bar diameter to avoid interference with other reinforcement, conduits or embedded items, the resulting arrangement of bars, including additional bars required to meet structural requirements, shall be approved before concrete is placed. In the event of a conflict in locations of embedded items and steel reinforcement, the relocation of the embedded items, or cutting, bending, addition, displacement or omission of steel reinforcement will only be permitted with the approval of the Contracting Officer.

### 3.1.2 Splicing

Splices of reinforcement shall conform to ACI 318/318R/318M and shall be made only as required or indicated. Splicing shall be by lapping or by mechanical or welded butt connection; except that lap splices shall not be used for bars larger than No. 11 unless otherwise indicated. Welding shall conform to AWS D1.4. Welded butt splices shall be full penetration butt welds. Lapped bars shall be placed in contact and securely tied or spaced transversely apart to permit the embedment of the entire surface of each bar in concrete. Lapped bars shall not be spaced farther apart than one-fifth the required length of lap or 150 mm (6 inches). Mechanical butt splices shall be in accordance with the recommendation of the manufacturer of the mechanical splicing device. Butt splices shall develop 125 percent of the specified minimum yield tensile strength of the spliced bars or of the smaller bar in transition splices. Bars shall be flame dried before butt splicing. Adequate jigs and clamps or other devices shall be provided to support, align, and hold the longitudinal centerline of the bars to be butt spliced in a straight line.

### 3.2 DOWEL INSTALLATION

Dowels shall be installed in slabs on ground at locations indicated and at right angles to joint being doweled. The type of dowel shall be as indicated on the drawings. Dowels shall be accurately positioned and aligned parallel to the finished concrete surface before concrete placement (dowels have to be tied in place). Sleeves shall project 13 mm (1/2 inch) beyond the end of the dowel with the sleeve end sealed. One end of dowels shall be coated with a bond breaker with a 13 mm (1/2 inch) space at the end of the dowel or be surrounded by a sleeve.

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SECTION 05090

WELDING, STRUCTURAL

PART 1 - GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

AISC-S342L (1993) Load Resistance Factor Design  
Specification for Structural Steel Buildings

AMERICAN SOCIETY FOR NONDESTRUCTIVE TESTING (ASNT)

ASNT-2055 (1996) Recommended Practice SNT-TC-1A

AMERICAN WELDING SOCIETY (AWS)

AWS A2.4 (1998) Standard Symbols for Welding, Brazing and  
Nondestructive Examination

AWS A3.0 (1994) Standard Welding Terms and Definitions

AWS D1.1 (2000) Structural Welding Code - Steel

AWS Z49.1 (1999) Safety in Welding and Cutting and Allied  
Processes

1.2 DEFINITIONS

Definitions of welding terms shall be in accordance with AWS A3.0.

1.3 GENERAL REQUIREMENTS

The design of welded connections shall conform to AISC S342L unless otherwise indicated or specified. Material with welds will not be accepted unless the welding is specified or indicated on the drawings or otherwise approved. Welding shall be as specified in this section, except where additional requirements are shown on the drawings or are specified in other sections. Welding shall not be started until welding procedures, welders, welding operators, and tackers have been qualified and the submittals approved by the Contracting Officer. Each Contractor performing welding shall maintain records of the test results obtained in welding procedure, welder, welding operator, and tacker performance qualifications.

#### 1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01330 - SUBMITTAL PROCEDURES:

##### SD-03 Product Data

Welding Procedure Qualifications; G.

Welder, Welding Operator, and Tacker Qualification; G.

Inspector Qualification; G.

Copies of the welding procedure specifications; the procedure qualification test records; and the welder, welding operator, or tacker qualification test records.

##### SD-06 Test Reports

Quality Control; G.

A quality assurance plan and records of tests and inspections.

#### 1.5 WELDING PROCEDURE QUALIFICATIONS

Except for prequalified (per AWS D1.1) and previously qualified procedures, each Contractor performing welding shall record in detail and shall qualify the welding procedure specification for any welding procedure followed in the fabrication of weldments. Qualification of welding procedures shall conform to AWS D1.1 and to the specifications in this section. Copies of the welding procedure specification and the results of the procedure qualification test for each type of welding which requires procedure qualification shall be submitted for approval. Approval of any procedure, however, will not relieve the Contractor of the sole responsibility for producing a finished structure meeting all the requirements of these specifications. This information shall be submitted on the forms in Appendix E of AWS D1.1. Welding procedure specifications shall be individually identified and shall be referenced on the detail drawings and erection drawings, or shall be suitably keyed to the contract drawings. In case of conflict between this specification and AWS D1.1, this specification governs.

##### 1.5.1 Previous Qualifications

Welding procedures previously qualified by test may be accepted for this contract without requalification if the following conditions are met:

a. Testing was performed by an approved testing laboratory, technical consultant, or the Contractor's approved quality control organization.

b. The qualified welding procedure conforms to the requirements of this specification and is applicable to welding conditions encountered under this contract.

c. The welder, welding operator, and tacker qualification tests conform to the requirements of this specification and are applicable to welding conditions encountered under this contract.

#### 1.5.2 Prequalified Procedures

Welding procedures which are considered prequalified as specified in AWS D1.1 will be accepted without further qualification. The Contractor shall submit for approval a listing or an annotated drawing to indicate the joints not prequalified. Procedure qualification shall be required for these joints.

#### 1.5.3 Retests

If welding procedure fails to meet the requirements of AWS D1.1, the procedure specification shall be revised and requalified, or at the Contractor's option, welding procedure may be retested in accordance with AWS D1.1. If the welding procedure is qualified through retesting, all test results, including those of test welds that failed to meet the requirements, shall be submitted with the welding procedure.

### 1.6 WELDER, WELDING OPERATOR, AND TACKER QUALIFICATION

Each welder, welding operator, and tacker assigned to work on this contract shall be qualified in accordance with the applicable requirements of AWS D1.1. Welders, welding operators, and tackers who make acceptable procedure qualification test welds will be considered qualified for the welding procedure used.

#### 1.6.1 Previous Qualifications

At the discretion of the Contracting Officer, welders, welding operators, and tackers qualified by test within the previous 6 months may be accepted for this contract without requalification if all the following conditions are met:

a. Copies of the welding procedure specifications, the procedure qualification test records, and the welder, welding operator, and tacker qualification test records are submitted and approved in accordance with the specified requirements for detail drawings.

b. Testing was performed by an approved testing laboratory, technical consultant, or the Contractor's approved quality control organization.

c. The previously qualified welding procedure conforms to the requirements of this specification and is applicable to welding conditions encountered under this contract.

d. The welder, welding operator, and tacker qualification tests conform to the requirements of this specification and are applicable to welding conditions encountered under this contract.

#### 1.6.2 Certificates

Before assigning any welder, welding operator, or tacker to work under this contract, the Contractor shall submit the names of the welders, welding operators, and tackers to be employed, and certification that each individual is qualified as specified. The certification shall state the type of welding and positions for which the welder, welding operator, or tacker is qualified, the code and procedure under which the individual is qualified, the date qualified, and the name of the firm and person certifying the qualification tests. The certification shall be kept on file, and 3 copies shall be furnished. The certification shall be kept current for the duration of the contract.

#### 1.6.3 Renewal of Qualification

Requalification of a welder or welding operator shall be required under any of the following conditions:

a. It has been more than 6 months since the welder or welding operator has used the specific welding process for which he is qualified.

b. There is specific reason to question the welder or welding operator's ability to make welds that meet the requirements of these specifications.

c. The welder or welding operator was qualified by an employer other than those firms performing work under this contract, and a qualification test has not been taken within the past 12 months. Records showing periods of employment, name of employer where welder, or welding operator, was last employed, and the process for which qualified shall be submitted as evidence of conformance.

d. A tacker who passes the qualification test shall be considered eligible to perform tack welding indefinitely in the positions and with the processes for which he is qualified, unless there is some specific reason to question the tacker's ability. In such a case, the tacker shall be required to pass the prescribed tack welding test.

#### 1.7 INSPECTOR QUALIFICATION

Inspection and nondestructive testing personnel shall be qualified in accordance with the requirements of ASNT-2055 for Levels I or II in the applicable nondestructive testing method. The inspector may be supported by assistant welding inspectors who are not qualified to ASNT-01, and assistant inspectors may perform specific inspection functions under the supervision of the qualified inspector.

## 1.8 SYMBOLS

Symbols shall be in accordance with AWS A2.4, unless otherwise indicated.

## 1.9 SAFETY

Safety precautions during welding shall conform to AWS Z49.1.

## PART 2 - PRODUCTS

### 2.1 WELDING EQUIPMENT AND MATERIALS

All welding equipment, electrodes, welding wire, and fluxes shall be capable of producing satisfactory welds when used by a qualified welder or welding operator performing qualified welding procedures. All welding equipment and materials shall comply with the applicable requirements of AWS D1.1.

## PART 3 - EXECUTION

### 3.1 WELDING OPERATIONS

#### 3.1.1 Requirements

Workmanship and techniques for welded construction shall conform to the requirements of AWS D1.1 and AISC S342L. When AWS D1.1 and the AISC S342L specification conflict, the requirements of AWS D1.1 shall govern.

#### 3.1.2 Identification

Welds shall be identified in one of the following ways:

a. Written records shall be submitted to indicate the location of welds made by each welder, welding operator, or tacker.

b. Each welder, welding operator, or tacker shall be assigned a number, letter, or symbol to identify welds made by that individual. The Contracting Officer may require welders, welding operators, and tackers to apply their symbol next to the weld by means of rubber stamp, felt-tipped marker with waterproof ink, or other methods that do not cause an indentation in the metal. For seam welds, the identification mark shall be adjacent to the weld at 1 meter (3 feet) intervals. Identification with die stamps or electric etchers shall not be allowed.

### 3.2 QUALITY CONTROL

Visual inspection and testing shall be performed by an approved independent commercial inspection and/or testing laboratory. The contractor shall perform necessary inspection to determine conformance with paragraph "STANDARDS OF ACCEPTANCE". All field welds shall be visually inspected. All welds which are not acceptable from visual inspection and all full penetration field welds shall be inspected by radiographic or ultrasonic methods to determine conformance with paragraph "STANDARDS OF ACCEPTANCE". Procedures and

techniques for inspection shall be in accordance with applicable requirements of AWS D1.1, except that in radiographic inspection only film types described as "fine grain" or "extra fine" shall be employed. Metal deck welding inspection shall be performed by visual inspection only.

### 3.3 STANDARDS OF ACCEPTANCE

Dimensional tolerances for welded construction, details of welds, and quality of welds shall be in accordance with the applicable requirements of AWS D1.1 and the contract drawings. Nondestructive testing shall be by visual inspection, radiographic, or ultrasonic, methods. The minimum extent of nondestructive testing shall be 100 percent of welds or joints.

#### 3.3.1 Nondestructive Examination

The welding shall be subject to inspection and tests in the mill, shop, and field. Inspection and tests in the mill or shop will not relieve the Contractor of the responsibility to furnish weldments of satisfactory quality. When materials or workmanship do not conform to the specification requirements, the Government reserves the right to reject material or workmanship or both at any time before final acceptance of the structure containing the weldment.

#### 3.3.2 Destructive Tests

When metallographic specimens are removed from any part of a structure, the Contractor shall make repairs. The Contractor shall employ qualified welders or welding operators, and shall use the proper joints and welding procedures, including peening or heat treatment if required, to develop the full strength of the members and joints cut and to relieve residual stress.

### 3.4 GOVERNMENT INSPECTION AND TESTING

In addition to the inspection and tests performed by the Contractor for quality control, the Government will perform inspection and testing for acceptance to the extent determined by the Contracting Officer. The costs of such inspection and testing will be borne by the Contractor if unsatisfactory welds are discovered, or by the Government if the welds are satisfactory. The work may be performed by the Government's own forces or under a separate contract for inspection and testing. The Government reserves the right to perform supplemental nondestructive and destructive tests to determine compliance with paragraph STANDARDS OF ACCEPTANCE.

### 3.5 CORRECTIONS AND REPAIRS

When inspection or testing indicates defects in the weld joints, the welds shall be repaired using a qualified welder or welding operator as applicable. Corrections shall be in accordance with the requirements of AWS D1.1 and the specifications. Defects shall be repaired in accordance with the approved procedures. Defects discovered between passes shall be repaired before additional weld material is deposited. Wherever a defect is removed and repair by welding is not required, the affected area shall be blended into the

surrounding surface to eliminate sharp notches, crevices, or corners. After a defect is thought to have been removed, and before rewelding, the area shall be examined by suitable methods to insure that the defect has been eliminated. Repair welds shall meet the inspection requirements for the original welds. Any indication of a defect shall be regarded as a defect, unless reevaluation by nondestructive methods or by surface conditioning shows that no unacceptable defect is present.

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### 2.1.1 Door Grades

#### 2.1.1.1 Standard Duty Doors

- (4) ANSI/SDI 100, Grade I, Model 2, of size(s) and design(s) indicated with core construction Type a. Provide Grade I unless noted otherwise. (4)

#### 2.1.1.2 Heavy Duty Doors

- (4) ANSI/SDI 100, Grade II, Model 2, with core construction Type a for interior doors and Type a for exterior doors, of size(s) and design(s) indicated. Provide Grade II where shown. (4)

#### 2.1.1.3 Extra Heavy Duty Doors

- (4) ANSI/SDI 100, Grade III, Model 2A with core construction Type a for interior doors and Type a for exterior doors, of size(s) and design(s) indicated. Provide Grade III where shown. (4)

### 2.2 CUSTOM HOLLOW METAL DOORS

Provide custom hollow metal doors where nonstandard steel doors are indicated. At the Contractor's option, custom hollow metal doors may be provided in lieu of standard steel doors. Door size(s), design, materials, construction, gages, and finish shall be as specified for standard steel doors and shall comply with the requirement of HMMMA HMM. Fill all spaces in doors with insulation. Close top and bottom edges with steel channels not lighter than 1.5 mm thick (16 gage). Close tops of exterior doors flush with an additional channel and seal to prevent water intrusion. Prepare doors to receive hardware specified in Section 08710, "Door Hardware". Undercut doors where indicated. Doors shall be 44.5 mm (1-3/4 inches) thick, unless otherwise indicated.

### 2.3 SOUND RATED STEEL DOORS

SDI 114, except as specified otherwise. Doors shall be of the sound classification scheduled.

### 2.4 ACCESSORIES

#### 2.4.1 Astragals

For pairs of exterior steel doors which will not have aluminum astragals or removable mullions, as specified in Section 08710, "Door Hardware", provide overlapping steel astragals with the doors. For interior pairs of fire rated doors, provide stainless steel astragals complying with NFPA 80 for fire rated assemblies.

#### 2.4.2 Moldings

Provide moldings around glass of interior and exterior doors. Provide nonremovable moldings on outside of exterior doors and on corridor side of

## 3.6 HARDWARE SETS

## HW-1 DR#113A, 115A

|      |             |                      |
|------|-------------|----------------------|
| 3 EA | BUTTS       | A8112 4 1/2" 626     |
| 1 EA | PASSAGE SET | F75 LEVER 626        |
| 1 EA | CLOSER      | C02021 PT 4C, 4F, 4H |
| 1 EA | KICK PLATE  | 10"x2" LDW 630       |
| 1 EA | WALL STOP   | L02251 630           |
| 3 EA | SILENCERS   | 608                  |

## HW-2 DR#114A

|      |            |                      |
|------|------------|----------------------|
| 3 EA | BUTTS      | A8112 4 1/2" 626     |
| 1 EA | STG. LOCK  | F86 LEVER 626        |
| 1 EA | CLOSER     | C02021 PT 4C, 4F, 4H |
| 1 EA | KICK PLATE | 10"x2" LDW 630       |
| 1 EA | WALL STOP  | L02251 630           |
| 3 EA | SILENCER   | 608                  |

## HW-3 DR#117A, 118A, 119A, 120A, 122A, 122B, 125A, 130A, 131A, 132A, 135A, 136A, 137A, 138A, 140A, 146A, 147A, 149A, 150A, 151A, 154A, 107A, 108A, 109A, 111A, 112A, 175A, 176A, 180A, 181A, 182A

|      |            |                  |
|------|------------|------------------|
| 3 EA | BUTTS      | A8112 4 1/2" 626 |
| 1 EA | ENTRY LOCK | F81 LEVER 626    |
| 1 EA | WALL STOP  | L02251 630       |
| 3 EA | SILENCERS  | 608              |

## HW-4 DR#121A

|      |            |                        |
|------|------------|------------------------|
| 6 EA | BUTTS      | A8112 4 1/2" 626       |
| 2 EA | FLUSHBOLTS | L14251 626 (IN ACTIVE) |
| 1 EA | STG. LOCK  | F86 (ACTIVE)           |
| 2 EA | SILENCER   | 608                    |

## HW-5 DR#123A

|      |            |                       |
|------|------------|-----------------------|
| 6 EA | BUTTS      | A8111 4 1/2" 626      |
| 2 EA | PANIC      | TYPE 2 FUNCTION 8 630 |
| 2 EA | CLOSER     | C02021 PT 4C, 4F, 4H  |
| 2 EA | KICK PLATE | 10"x2" LDW 630        |
| 2 EA | E/M HOLDER | EMF 24120 630         |

(4)

(4)

(4)

HW-11 DR#156B

|       |              |   |
|-------|--------------|---|
| 6 EA  | BUTTS        | A8112 4 1/2" NRP 626                        |
| 2 EA  | FLUSHBOLTS   | L04251 626                                  |
| 1 EA  | STORAGE LOCK | F 86 LEVER 626 (MODIFY STRIKE FOR ASTRAGAL) |
| 1 EA  | DEADBOLT     | E0111 630                                   |
| 1 EA  | CLOSER       | C02021 PT 4C, 4F, 4H (ACTIVE LEAF)          |
| 1 EA  | O.H. STOP    | C01511 630 (IN-ACTIVE LEAF)                 |
| 1 EA  | THRESHOLD    | 170A x DW                                   |
| 2 EA  | SWEEP        | 315CN x DW                                  |
| 1 SET | WEATHERSTRIP | 303AV x DS                                  |
| 1 EA  | ASTRAGAL     | 357SP x DH x S88D (ACTIVE LEAF)             |

(4)

HW-12 DR#158A, 159A, 161A, 162A, 163A, 164A

|      |             |                         |
|------|-------------|-------------------------|
| 3 EA | BUTTS       | 1HTAB850 4 1/2" 626 (H) |
| 1 EA | ASYLUM LOCK | F87 LEVER 626           |
| 1 EA | STOP        | AS REQ'D                |
| 3 EA | SILENCER    | 608                     |

HW-13 DR#157A

|       |            |                      |
|-------|------------|----------------------|
| 3 EA  | BUTTS      | 1HTAB850 4 1/2" 626  |
| 1 EA  | LOCK       | F84 LEVER 626        |
| 1 EA  | CLOSER     | C02021 PT 4C, 4F, 4H |
| 1 EA  | KICK PLATE | 10"x2" LDW 630       |
| 1 EA  | FLOOR STOP | 462 x 626            |
| 1 SET | SMOKE SEAL | S88D x DS            |
| 1 SET | HOT SEAL   | HSS2000 x DS         |

HW-14 DR#159B

|       |               |                          |
|-------|---------------|--------------------------|
| 3 EA  | BUTTS         | 1HTAB850 4 1/2" 626(H)   |
| 1 EA  | ASYLUM LOCK   | F87 LEVER 626            |
| 1 EA  | CLOSER HO     | C02021 PT 4C, 4F, 4H, 8B |
| 1 EA  | KICK PLATE    | 10"x2" LDW 630           |
| 1 EA  | FLOOR STOP    | 462 x 626                |
| 1 EA  | THRESHOLD     | 170A x DW                |
| 1 EA  | SWEEP         | 315CN x DW               |
| 1 SET | WEATHER STRIP | 303AV x DS               |

HW-15 DR#161B, 163B

|       |               |                    |
|-------|---------------|--------------------|
| 3 EA  | BUTTS         | A8112 4 1/2" 626   |
| 1 EA  | DEADBOLT      | E0111 630          |
| 1 EA  | PULL          | J401 4" C TO C 630 |
| 1 EA  | LOCK GUARD    | 322 630            |
| 1 EA  | THRESHOLD     | 170A x DW          |
| 1 EA  | SWEEP         | 315CN x DW         |
| 1 SET | WEATHER STRIP | 303AV x DS         |